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| 10/677,129 | 09/30/2003 | Pierre-Jean Reissman | 13768.783.108 | 3890 |

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| EXAMINER | |
|---|---|
| DAO, THUY CHAN | |
| ART UNIT | PAPER NUMBER |
| 2192 | |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/677,129 | REISSMAN ET AL. | |
| | Examiner | Art Unit | |
| | Thuy Dao | 2192 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *03* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *08 May 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *36-46* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *36-46* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

1. This action is responsive to the amendment filed on May 8, 2008.

2. Claims 36-46 have been examined.

### Response to Amendments

3. In the instant amendments, claim 36 has been amended.

### Response to Arguments

4. Applicants' arguments have been considered but are moot in view of the new ground(s) of rejection.

Claims 36 has been amended to recite "then generating [[a listing of]] code, from intermediate code, that [[produced]] specified the differences between the first and second binary software builds" (lines 20-21), wherein "intermediate code" is defined as "...compiling source code into intermediate code, assembly code or other compiled code" (specification, page 17, lines 19-20, emphasis added).

After further consideration, the examiner notes that the plain language of the claim does not exclude - -then generating code, from intermediate code (from bytecode files), that specified differences/comparison results between said bytecode files- -.

Applicants' amendment necessitated the new ground(s) of rejection presented in this Office action.

### Claim Rejections – 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 36-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Avvari '074 (art of record, US Patent No. 7,165,074) in view of US Patent No. 6,282,698 to Baker et al. (art made of record, hereafter "Baker").

**Claim 36:**

Avvari '074 discloses a physical computer readable medium and *a method of tracking differences between software builds of a software product* (e.g., col.3: 4-34), *the method comprising:*

*scanning a first binary software build of a software product to automatically discover classes in the first binary software build* (e.g., FIG. 2, blocks 104-114-118, col.7: 14-28, a first binary software build as the Profiled Java Executable 104),

*wherein the first binary build comprises a first set of binary files compiled from source code of the software products* (e.g., FIG. 6A, col.10: 23-62);

*discovering dependencies of the discovered classes* (e.g., col.7: 18-21, discovering dependencies to form a call tree as Coverage Data 118);

*storing a first dictionary data structure including the discovered classes with their corresponding discovered dependencies* (e.g., FIG. 2, blocks 118-116-102, col.7: 18-28, storing Coverage Data 118 in Database 102);

*comparing the first dictionary data structure with a second dictionary data structure, the second dictionary data structure including classes organized with their dependencies of a second binary software build* (e.g., col.5: 3-16, comparing an updated call tree with a corresponding existing call tree; FIG. 11, col.12: 49-62; col.7: 29-55, Data Analyzer 112a comparing with a second dictionary data structure from modification to the source code 103 to produce Dependency Test List 111a),

*wherein the second binary build comprises a second set of binary files compiled from source code of the software product* (e.g., FIG. 10, col.12: 15-30)

*by comparing classes and dependencies set forth in the first and second dictionary data structures* (e.g., col.5: 3-16, comparing an updated call tree with a corresponding existing call tree; FIG. 11, col.12: 49-62; col.7: 29-55, Data Analyzer 112a comparing with a second dictionary data structure from modification to the source code 103 to produce Dependency Test List 111a); *and*

*based on the comparison of the first dictionary data structure with the second dictionary data structure, providing an indication of differences between the first and second binary software builds* (e.g., FIG. 2, col.&; 42-60, from Dependency Test List 111a, Data Optimizer 112b generates Precision Test List 111b and Output 115 to indicate negative effects from said modification to the source code 103) *including:*

*determining what code produced the differences between the first and second binary software builds* (e.g., col.8: 39 – col.9: 28; col.9: 52 – col.10: 22).

Avvari '074 does not explicitly disclose *generating code, from intermediate code, that specified the differences between the first and second binary software builds.*

However, in an analogous art, Baker further discloses *generating code, from intermediate code, that specified the differences between the first and second binary software builds* (e.g., FIG. 6, col.12: 7-60, generating code, from differences/similarities between bytecode files, that specified differences/comparison results between said bytecode files, i.e., generating code to specify/report differences/comparison results in a table-formatted report; col.5: 36 – col.6: 5, emphasis added).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Baker's teaching into Avvari's teaching. One would have been motivated to do so to determine the differences and/or similarities between bytecode files as suggested by Avvari '074 (e.g., col.4: 16-49).

**Claim 37:**

The rejection of claim 36 is incorporated. Avvari also discloses *discovering classes comprises: (a) loading configuration information for the first binary software build; (b) identifying a class of the first software build; (c) creating an instance of the identified class; and (d) repeating acts (b) and (c) for other classes in the first binary software build* (e.g., FIG. 7A, col.11: 8-67).

**Claim 38:**

The rejection of claim 37 is incorporated. Avvari also discloses *loading configuration information for the first binary software build comprises loading default configuration information* (e.g., col.8: 66 – col.9: 21).

**Claim 39:**

The rejection of claim 37 is incorporated. Avvari also discloses *loading configuration information for the first binary software build comprises loading additional configuration information* (e.g., col.8: 29-38).

**Claim 40:**

The rejection of claim 37 is incorporated. Avvari also discloses *creating an instance of the identified class comprises checking to see if a factory is defined for the class* (e.g., FIG. 7B-C, col.11: 8-67).

**Claim 41:**

The rejection of claim 36 is incorporated. Avvari also discloses *discovering dependencies of the discovered classes comprises exploring the class to determine if there are any constructors, properties, attributes or methods for the class* (e.g., FIG. 7A, col.11: 8-67).

**Claim 42:**

The rejection of claim 41 is incorporated. Avvari also discloses *if there are any constructors, properties, attributes or methods for the class, storing the constructors, properties, attributes or methods for the class in a temporary structure in preparation for storing in the first dictionary data structure* (e.g., FIG. 2, col.7: 14-60).

**Claim 43:**

The rejection of claim 36 is incorporated. Avvari also discloses *providing an indication of differences between the first and second binary software builds comprises providing a delta which indicates entries that have been added or deleted between the*

*first dictionary data structure and the second dictionary data structure* (e.g., FIG. 10, col.12: 15-29).

**Claim 44:**

The rejection of claim 36 is incorporated. Avvari also discloses *displaying a tree representation of the dictionary data structure that can be used to determine if any classes have been modified* (e.g., FIG. 7A-C, col.11; 8-67).

**Claim 45:**

The rejection of claim 36 is incorporated. Avvari also discloses *receiving user input for loading constructors to specific classes for increasing code coverage testing for changes between the first software build and the second software build* (e.g., FIG. 10, col.12: 15-29).

**Claim 46:**

Claim 46 is a storage computer readable medium, which recites the same limitations as those of claim 36, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim, it also teaches all of the limitations of claim 46.

7. Claims 36 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Avvari '401 (art of record, US Patent No. 6,978,401) in view of Baker.

**Claim 36:**

Avvari '401 discloses a physical computer readable medium and *a method of tracking differences between software builds of a software product* (e.g., FIG. 2, col.7: 1-42), *the method comprising:*

*scanning a first binary software build of a software product to automatically discover classes in the first binary software build* (e.g., FIG.12A, blocks 1202-1204, col.13: 5-13);

*wherein the first binary build comprises a first set of binary files compiled from source code of the software products* (e.g., FIG. 7, col.9: 12-67)*;*

*discovering dependencies of the discovered classes* (e.g., FIG. 12A, block 1206, col.13: 13-15)*;*

*storing a first dictionary data structure including the discovered classes with their corresponding discovered dependencies* (e.g., FIG. 12A, block 1208, col.13: 15-18)*;*

*comparing the first dictionary data structure with a second dictionary data structure, the second dictionary data structure including classes organized with their dependencies of a second binary software build* (e.g., FIG. 12A, block 1210, col.13: 18-21),

*wherein the second binary build comprises a second set of binary files compiled from source code of the software product* (e.g., FIG. 8, col.10: 1—col.11: 56),

*by comparing classes and dependencies set forth in the first and second dictionary data structures* (e.g., FIG. 12A, block 1210, col.13: 18-21)*; and*

*providing an indication of differences between the first and second binary software builds* (e.g., FIG. 12A, block 1212 → YES/NO, col.13: 22-64) *including:*

*determining what code produced the differences between the first and second binary software builds* (e.g., col.5: 13 – col.6: 39; col.7: 13-42).

Avvari '401 does not explicitly disclose *generating code, from intermediate code, that specified the differences between the first and second binary software builds.*

However, in an analogous art, Baker further discloses *generating code, from intermediate code, that specified the differences between the first and second binary software builds* (e.g., FIG. 6, col.12: 7-60, generating code, from differences/similarities between bytecode files, that specified differences/comparison results between said bytecode files, i.e., generating code to specify/report differences/comparison results in a table-formatted report; col.5: 36 – col.6: 5, emphasis added).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Baker's teaching into Avvari's teaching. One would

have been motivated to do so to determine the differences and/or similarities between bytecode files as suggested by Avvari '074 (e.g., col.4: 16-49).

**Claim 46:**

Claim 46 is a storage computer readable medium, which recites the same limitations as those of claim 36, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim, it also teaches all of the limitations of claim 46.

**Conclusion**

8. Applicants' amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication should be directed to examiner Thuy Dao (Twee), whose telephone/fax numbers are (571) 272 8570 and (571) 273 8570, respectively. The examiner can normally be reached on every Tuesday, Thursday, and Friday from 6:00AM to 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam, can be reached at (571) 272 3695.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273 8300.

Any inquiry of a general nature of relating to the status of this application or proceeding should be directed to the TC 2100 Group receptionist whose telephone number is (571) 272 2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Thuy Dao/
Examiner, Art Unit 2192

/Tuan Q. Dam/
Supervisory Patent Examiner, Art Unit 2192